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FEE TRANSMITTAL For FY 2005

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 500.00

Complete if Known

Application Number	10/816,369
Filing Date	04/01/2004
First Named Inventor	Heribert Schwartz et al
Examiner Name	Terrence R. Till
Art Unit	1744
Attorney Docket No.	2001P15115WOUS

METHOD OF PAYMENT (check all that apply)

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☒ Deposit Account Deposit Account Number: 502786 Deposit Account Name: BSH Home Appliances Corp.

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	
Design	200	100	100	50	130	65	
Plant	200	100	300	150	160	80	
Reissue	300	150	500	250	600	300	
Provisional	200	100	0	0	0	0	

2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims.	360	180
Total Claims	Extra Claims	Fee (\$)
- 20 or HP = _____ x <u>50.00</u> = _____		
HP = highest number of total claims paid for, if greater than 20.		
Indep. Claims	Extra Claims	Fee (\$)
- 3 or HP = _____ x <u>200.00</u> = _____		
HP = highest number of independent claims paid for, if greater than 3.		

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
- 100 = _____ / 50 = _____ (round up to a whole number) x _____ = _____				

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): Appeal Brief Fee

Fees Paid (\$)

500.00

SUBMITTED BY

Signature

Craig J. Loest

Registration No.
(Attorney/Agent) 48,557

Telephone 252-672-7930

Name (Print/Type)

Craig J. Loest

Date October 25, 2006

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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ATTORNEY DOCKET NO.: 2001P15115WOUS

CERTIFICATE OF MAILING UNDER 37 CFR 1.8

Serial No.: 10/816,369
Filing Date: 04/01/2004
Applicant: Heribert Schwarz et al
Title: DEVICE FOR SUCKING UP PARTICLES TO BE COLLECTED AND A FLOOR VACUUM CLEANER
Date of Deposit: October 25, 2006
Type of Document(s): Certificate of Mailing (1 page);
Fee Transmittal Form, Original and Copy (2 pages);
Appeal Brief (40 pages, including Evidence Appendix);
Return postcard.

CERTIFICATE OF MAILING UNDER 37 C.F.R. Section 1.8

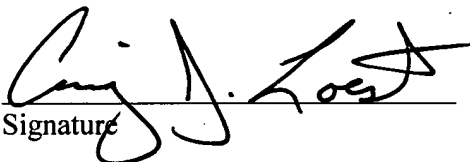
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October 25, 2006

Date of Deposit

Craig J. Loest

Name of Person Signing


Signature

Craig J. Loest
Registration No. 48,557
Printed Name

BSH Home Appliances Corp.
100 Bosch Blvd.
New Bern, NC 28562
Phone: 252-672-7930
Fax: 714-845-2807
craig.loest@bshg.com



ATTORNEY DOCKET NO.: 2001P15115WOUS

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Heribert Schwartz et al
Application Number: 10/816,369
Filing Date: 04/01/2004
Group Art Unit: 1744
Examiner: Terrence R. Till
Title: DEVICE FOR SUCKING UP PARTICLES TO BE
COLLECTED AND A FLOOR VACUUM CLEANER

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF

Dear Sir:

Pursuant to 37 CFR 1.192, Appellants hereby file an Appeal Brief in the above-identified application within the two month period for reply ending November 8, 2006. This Appeal Brief is also accompanied by the requisite fee set forth in 37 CFR 1.17(f).

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(1) **REAL PARTY IN INTEREST**

The real party in interest is the inventors, BSH Bosch und Siemens Hausgeraete GmbH, the Assignee in the application, which is a joint venture between Siemens AG and Robert Bosch GmbH, all three of which are German companies.

(2) **RELATED APPEALS AND INTERFERENCES**

There are no appeals or interferences that will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) **STATUS OF CLAIMS**

Claims 1-7, 9, 11 and 13-22 are pending in the application, all of which are rejected and on Appeal.

(4) STATUS OF AMENDMENTS

Claims 1-7, 9, 11 and 13-22 on Appeal before the Board are those presented prior to the Final Office action, dated April 10, 2006. The claims were argued, but not amended, after the Final Office action in a response dated June 29, 2006.

(5) SUMMARY OF CLAIMED SUBJECT MATTER

Claim 1 of the present application recites a device for sucking up particles to be collected. The inventive device comprises at least one collection chamber for accumulating the particles. (see the specification of the present application at page 7, line 24 to page 8, line 6) The inventive device also comprises a suction device and at least one reception chamber storing said suction device. (see page 9, lines 4-18) The inventive device also comprises a partition separating said collection chamber from said reception chamber and having a partition surface, said partition having an inlet orifice formed therein for channeling an air stream from said collection chamber to said suction device, said inlet orifice of said partition coupling said collection chamber to said suction device in said reception chamber. (see page 8, lines 20-22 and page 9, line 20 to page 11, line 14) The inventive device also comprises an air guide funnel having an entry surface forming a part of said partition surface. (see page 11, line 16 to page 13, line 8) The inventive device also comprises an intervention guard element connected to the air guide funnel and projecting in a direction toward said collection chamber. (see page 13, line 10 to page 14, line 7) The inventive device also comprises a filter bag disposed in said collection space for accumulating the particles. (see page 8, lines 2-18)

Claim 13 of the present application recites a vacuum cleaner. The inventive device comprises a collection chamber for accumulating particles. (see page 7, line 24 to page 8, line 6) The inventive device also comprises a suction device generating an air flow. (see page 9, lines 4-18) The inventive device also comprises a reception chamber housing the suction device. (see page 8, line 20 to page 9, line 18) The inventive device also comprises a partition separating the collection chamber from the reception chamber and defining an inlet orifice receiving the air flow from the collection chamber. (see page 8, lines 20-22 and page 9, line 20 to page 10, line 10) The inventive device also comprises an air guide funnel connected to the partition at the inlet orifice and extending away the collection chamber to an exit orifice, the inlet orifice having a substantially rectangular cross-section and the exit orifice having a substantially circular cross-section. (see page 10, line 1 to page 13, line 8)

The inventive device also comprises an intervention guard element connected to the air guide funnel and projecting in a direction toward the collection chamber. (see page 13, line 10 to page 14, line 7)

Claim 19 of the present application recites a vacuum cleaner. The inventive device comprises a collection chamber for accumulating particles. (see page 7, line 24 to page 8, line 6) The inventive device also comprises a suction device generating an air flow. (see page 9, lines 4-18) The inventive device also comprises a reception chamber housing the suction device. (see page 8, line 20 to page 9, line 18) The inventive device also comprises a partition separating the collection chamber from the reception chamber and defining an inlet orifice receiving the air flow from the collection chamber. (see page 8, lines 20-22 and page 9, line 20 to page 10, line 10) The inventive device also comprises an air guide funnel connected to the partition at the inlet orifice and extending away the collection chamber to an exit orifice, the inlet orifice having a substantially rectangular cross-section and the exit orifice having a substantially circular cross-section. (see page 10, line 1 to page 13, line 8) The inventive device also comprises an intervention guard element including a dome-shaped ribbed body connected to the air guide funnel and projecting in a direction toward the collection chamber. (see page 13, line 10 to page 14, line 7) The inventive device also comprises a filter bag disposed in the collection space for accumulating the particles. (see page 8, lines 2-18)

(6) GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

(a) Whether Claims 1, 2, 4-7, 9, 11, 13, 16-19 and 22 were rejected under 35 USC §102(b) as being anticipated by Kuwahara (US 2,237,499).

(b) Claims 3 and 13-22 were rejected under 35 USC §103(a) as being unpatentable over Kuwahara in view of Yip (US 6,125,501).

Applicants note that the rejection of Claims 1, 2, 4-7 and 11 under 35 USC §102(b) as being anticipated by Osterdahl (US 2,237,499) was withdrawn by the Examiner in the Advisory Action dated July 27, 2006.

(7) **ARGUMENT**(a) Rejection under 35 U.S.C. § 102(b) as being anticipated by Kuwahara Claim 1

Independent Claim 1 recites a device for sucking up particles to be collected, the device comprising: at least one collection chamber for accumulating the particles; a suction device; at least one reception chamber storing said suction device; a partition separating said collection chamber from said reception chamber and having a partition surface, said partition having an inlet orifice formed therein for channeling an air stream from said collection chamber to said suction device, said inlet orifice of said partition coupling said collection chamber to said suction device in said reception chamber; an air guide funnel having an entry surface forming a part of said partition surface; an intervention guard element connected to the air guide funnel and projecting in a direction toward said collection chamber; a filter bag disposed in said collection space for accumulating the particles.

Kuwahara discloses a vacuum cleaner having a double jet stream air flow. The vacuum cleaner includes a tubular main body (1) with a dust collecting chamber (7) retaining a bag (10). A partition (8) includes an annular spout portion (9) and divides the dust collecting chamber (7) from the center of the tubular main body (1). A dust filter (37) may be positioned at the center of the partition (8). A tubular partition (13) is fixed within the tubular body (1) with braces (14) and a motor (15) is also supported by the braces (14) within the tubular partition (13). The front end of the tubular partition (13) includes an opening tube (16) spaced apart from the annular spout portion (9) to form an annular nozzle (17) with a circular mouth (c) being formed between the spout portion (9) and the opening tube (16). An annular radially extending partition (18) is disposed at the rear end of the tubular partition (13) opposite the partition (8) and a fan box (21) is formed between the tubular partition (13) and the back of the main body (1). A suction or exhaust fan (23) is disposed within the fan box (21) outside of the tubular partition (13) and is driven by the motor (15).

Kuwahara does not disclose, among other things, “a partition separating said collection chamber from said reception chamber and having a partition surface,

said partition having an inlet orifice formed therein for channeling an air stream from said collection chamber to said suction device, said inlet orifice of said partition coupling said collection chamber to said suction device in said reception chamber,” as recited in Claim 1. More specifically, Kuwahara does not disclose any portion of the partition coupling the collecting chamber to the suction device in the reception chamber. Rather, the partition (8) of Kuwahara terminates at the end of the spout (9) and the free end of the spout (9) is not coupled to anything else. The entire purpose of Kuwahara is to have the spout (9) spaced apart and uncoupled from the opening tube (16) to form an open space between the spout (9) and the opening tube (16) that forms the circular mouth (c). The secondary air flow passes through the open space of the circular mouth (c) and provides the Venturi effect through the Venturi-shaped annular passage (d).

In Kuwahara, the end of the annular spout (9) of the partition (8) *must* be free and uncoupled from other elements to provide this air flow through the open space of the circular mouth (c). Using any part of the partition (8) to couple the dust collecting chamber (7) to any other element would eliminate the circular mouth (c) prevent the secondary air flow that provides the Venturi effect in Kuwahara. Therefore, not only does Kuwahara not disclose this element of Claim 1, but Kuwahara specifically *teaches away* from this element.

For these and other reasons, Kuwahara does not disclose the subject matter defined by independent Claim 1. Therefore, Claim 1 is allowable. Claims 2-7, 9 and 11 depend from Claim 1 and are allowable for the same reasons and also because they recite additional patentable subject matter.

Claim 11 depends from Claim 1 and further recites “at least one filter element for purifying the air stream from said collection chamber to said suction device, said filter element is disposed upstream of said entry surface of said air guide funnel.” Claim 1 recited “an intervention guard element connected to the air guide funnel and projecting in a direction toward said collection chamber.” These are two separate elements recited by the claim. In addition, Claim 1 recites that the intervention guard element is “connected to the air guide funnel” and Claim 11 recites that the filter element “is disposed upstream of said entry surface of said air

guide funnel.” Therefore, one element is connected to the air guide funnel and the other element is disposed upstream of the air guide funnel. These limitations further clarify that they are separate elements because they are located in different positions with respect to the air guide funnel.

In the Final Office Action dated April 10, 2006, the Examiner cites the dust filter (37) of Kuwahara as disclosing both the “intervention guard element” of Claim 1 and the “filter element” of Claim 11. These are two separate elements and the dust filter (37) of Kuwahara cannot satisfy the requirements of both elements. If the dust filter (37) of Kuwahara discloses the “intervention guard element” connected to the air guide funnel, then it cannot also be disposed upstream of the entry surface of the air guide funnel.

For these and other reasons, Kuwahara does not disclose the subject matter defined by dependent Claim 11. Therefore, Claim 11 is allowable.

Claims 13 and 19

Independent Claims 13 and 19 both recite a vacuum cleaner comprising, among other things, “an air guide funnel connected to the partition at the inlet orifice and extending away the collection chamber to an exit orifice, the inlet orifice having a substantially rectangular cross-section and the exit orifice having a substantially circular cross-section.” Claims 16-18 depend from Claim 13 and Claim 22 depends from Claim 19.

On page 5 of the Final Office Action dated April 10, 2006, the Examiner acknowledges that Kuwahara “does not disclose the air guide funnel having an inlet orifice having a substantially rectangular cross-section and an exit orifice having a substantially circular cross-section.” Therefore, Applicants respectfully request that the rejection of Claims 13, 16-19 and 22 under 35 USC §102(b) as being anticipated by Kuwahara be withdrawn. The rejection of these claims under 35 USC §103(a) is discussed in greater detail below.

(b) Rejection under 35 U.S.C. § 103(a) over Kuwahara in view of Yip
Claim 13

Independent Claim 13 recites a vacuum cleaner, comprising: a collection chamber for accumulating particles; a suction device generating an air flow; a reception chamber housing the suction device; a partition separating the collection chamber from the reception chamber and defining an inlet orifice receiving the air flow from the collection chamber; an air guide funnel connected to the partition at the inlet orifice and extending away the collection chamber to an exit orifice, the inlet orifice having a substantially rectangular cross-section and the exit orifice having a substantially circular cross-section; and an intervention guard element connected to the air guide funnel and projecting in a direction toward the collection chamber.

As acknowledged by the Examiner, Kuwahara does not disclose the air guide funnel having an inlet orifice having a substantially rectangular cross-section and an exit orifice having a substantially circular cross-section. Yip does not cure the deficiencies of Kuwahara.

Yip discloses a hand-held vacuum cleaner including a central frusto-conical passage (22) with a square front opening (20) at its larger end and a rear opening (24) at its smaller end. Yip clearly indicates that the front opening (20) is square, but does not specifically mention the shape of the rear opening (24). Fig. 1 of Yip illustrates a cross-section view of the passage (22) from the square front opening (20) to the rear opening (24). Fig. 1 provides no indication that the cross-sectional shape of the passage (22) changes from the square front opening (20) to the rear opening (24). If the rear opening (24) was intended to be circular, there should be a difference in shading to represent the exposed curved surface of the passage (22) in this cross-sectional view. The description of Yip provides clearly states that various other portions of vacuum are square shaped, and the illustration of the rear opening (24) in Fig. 1 matches the style in which these other square features of the vacuum are shown.

On page 5, paragraph 10 of the Final Office Action dated April 10, 2006, the Examiner states that in the fan opening appears round behind the lattice in Fig. 3.

Applicants respectfully disagree. Nothing in Yip indicates that the feature identified by the Examiner is actually the rear opening (24) or that this feature is actually circular. This feature could be part of the fan (40) or some other part not identified in the description. If this truly was a circular opening, the change in cross-section shape should have been indicated in the cross-sectional Fig. 1. Every other opening in vacuum cleaner is square, and there is no reason to believe the rear opening (24) is anything different.

Nothing in Yip indicates the rear opening (24) has a circular shape. To the contrary, the cross-section of the rear opening (24) is illustrated the same as the square front opening (20) in Fig. 1 indicating the rear opening (24) should have a square shape. An air funnel guide having a square inlet and circular outlet is not normal for vacuum cleaners, and the Examiner has not cited any prior art that clearly identifies this feature. There is no reason to believe that the rear opening (24) of Yip has a different shape than the square front opening (20). Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of Claim 13 based on the combination of Kuwahara and Yip.

Even if Yip did disclose an air funnel guide with a square inlet and a circular outlet, which it does not, there is no teaching, suggestion or motivation to combine it with the vacuum cleaner of Kuwahara. Kuwahara discloses a cylindrical canister vacuum cleaner having a circular shape along the entire device. Kuwahara goes into extreme detail on how all the portions of the vacuum cleaner are circular and tubular to provide the desired air-flow. The entire purpose of Kuwahara is to create a desired air-flow through the canister that generates a Venturi effect and improves suction for the vacuum. This desired air-flow and improved suction is a result of the circular designs providing a smooth air flow path through the device. Every portion of Kuwahara, including the lid (2), the circular rubber packing (12), the tubular dust collecting chamber (7), the round partition (8), the annular spout portion (9), the circular mouth (c), the annular nozzle (17), the tubular partition (13), and the tubular main body (1), are specifically designed to have a continuous circular cross-section shape. Even the motor (15) of Kuwahara is specifically designed to have an aerodynamic cylindrical exterior shape with a rounded front

end that extends into the annular nozzle (9). Kuwahara clearly teaches utilizing consistent circular cross-sections for the various parts of the vacuum cleaner and teaches away from using parts with different cross-sectional shapes, such as a square. Placing an air funnel guide with a square inlet within the vacuum cleaner of Kuwahara would disrupt the air-flow patterns through the device and ruin the desired air-flow pattern that is the purpose of Kuwahara.

In the Final Office Action dated April 10, 2006, the Examiner cites In re Dailey, 149 USPQ 47, as supporting that a “change in shape or form is generally recognized as being within the level of ordinary skill in the art.” This case does not support the Examiner’s rejection and proposed combination. In re Dailey involved two baby bottles that were collapsible. Both bottles had circular cross-sectional shapes, but one was more squat and wide (“less than a hemisphere”) and the other was elongated and more narrow (similar to an egg shape). In re Dailey states that the configuration of the container is a mere matter of choice *because there was no reason presented why the configuration of the particular container is significant*. This is not the situation for the present application where the shape of the elements is very significant for both Kuwahara and the invention of the present application. In fact, the shape and configuration of the elements is the *most* significant feature of Kuwahara to provide the desired air flow. Therefore, the difference in shape between Kuwahara and the invention of the present application is not a mere matter of choice because Applicants have presented a specific reason why the shape and configuration of inlet orifice is significant. Applicants have enclosed a copy of In re Dailey and Ex Parte Jeffrey Moore in the “Evidence Appendix”. Ex Parte Jeffrey Moore is a more recent decision from the Board of Appeals describing how In re Dailey was improperly cited by an Examiner in a separate case.

The present application explains that the rectangular shape of the inlet is significant to increase the size of the entry surface for the air funnel guide to help reduce air turbulence and noise within the vacuum on page 3, lines 13-25. The circular shape of Kuwahara is also significant and there is no teaching, suggestion or motivation to change the shape of partition (8) from a circle to a square. The entire functionality of Kuwahara is dependent on the continuous circular shape

throughout the device, and changing the shape of partition (8) from a circle to a square would directly affect the air-flow through Kuwahara.

There is no teaching, suggestion or motivation to make a proposed modification if the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose. In re Gordon, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984). The Examiner is proposing to specifically modify the vacuum cleaner of Kuwahara, not some theoretical device. The proposed modifications must be considered as to how they would alter Kuwahara. As described above, modifying the partition (8) of Kuwahara to have a square shape instead of a circle shape would disrupt the desired smooth air flow and Venturi effect through the vacuum cleaner and make the device unsatisfactory for its intended purpose. Every part of Kuwahara is circular, and there is no logical reason to change the partition (8) to a square. Therefore, there is no suggestion or motivation to make the proposed modification.

For these and other reasons, Kuwahara and Yip, either alone or in combination, do not teach or suggest the subject matter defined by independent Claim 13. Therefore, Claim 13 is allowable. Claims 14-18 depend from Claim 13 and are allowable for the same reasons and also because they recite additional patentable subject matter.

Claim 15 depends from claim 13 and further recites wherein the air guide funnel, the partition, and the intervention guard element are constructed together as a single integrally formed structural part.

Nothing in the prior art suggests forming these elements as a single integral structural part. Kuwahara discloses a removable dust filter (37) within the partition (8). Conventional dust filters, such as a mesh-type filter shown in Kuwahara, generally must be removed or replaced when they become clogged. The intervention guard element recited in Claims 13 and 15 is not a convention filter. As recited in Claim 18, the filter element may be included as a separate part. The intervention guard element provides large openings that do not obstruct air flow, but prevent large object from reaching the suction device. It is not necessary to remove or replace the intervention guard element. Nothing in Kuwahara suggests

that the dust filter (37) is even made from a similar material as the partition (8) or could be formed integrally with the partition (8). The partition (8) is likely made from a rigid material, and the dust filter (37) appears to be made from a mesh material. Therefore, there is no suggestion or motivation to make this proposed modification.

Claim 19

Independent Claim 19 recites a vacuum cleaner, comprising: a collection chamber for accumulating particles; a suction device generating an air flow; a reception chamber housing the suction device; a partition separating the collection chamber from the reception chamber and defining an inlet orifice receiving the air flow from the collection chamber; an air guide funnel connected to the partition at the inlet orifice and extending away the collection chamber to an exit orifice, the inlet orifice having a substantially rectangular cross-section and the exit orifice having a substantially circular cross-section; an intervention guard element including a dome-shaped ribbed body connected to the air guide funnel and projecting in a direction toward the collection chamber; and a filter bag disposed in the collection space for accumulating the particles.

Claim 19 recites many of the same elements of Claim 13, including “an air guide funnel connected to the partition at the inlet orifice and extending away the collection chamber to an exit orifice, the inlet orifice having a substantially rectangular cross-section and the exit orifice having a substantially circular cross-section.” Therefore, the arguments above for Claim 13 regarding the inlet orifice having a substantially rectangular cross-section and the exit orifice having a substantially circular cross-section and the lack of any teaching, suggestion, or motivation to combine of Kuwahara and Yip are also applicable to Claim 19.

For these and other reasons, Kuwahara and Yip, either alone or in combination, do not teach or suggest the subject matter defined by independent Claim 19. Therefore, Claim 19 is allowable. Claims 20-22 depend from Claim 19 and are allowable for the same reasons and also because they recite additional patentable subject matter.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either teach or suggest the features of Claims 1-7, 9, 11 and 13-22. Claims 1-7, 9, 11 and 13-22 are, therefore, believed to be patentable over the art and since all of the dependent claims are ultimately dependent on one of these claims, they are believed to be patentable as well.

In view of the foregoing discussion, Applicants respectfully request reconsideration and allowance of Claims 1-7, 9, 11 and 13-22.

Respectfully submitted,



Craig J. Loest

Registration No. 48,557

October 25, 2006

BSH Home Appliances Corp.
100 Bosch Blvd
New Bern, NC 28562
Phone: 252-672-7930
Fax: 714-845-2807
email: craig.loest@bshg.com

(8) CLAIMS APPENDIX

1. A device for sucking up particles to be collected, the device comprising:
 - at least one collection chamber for accumulating the particles;
 - a suction device;
 - at least one reception chamber storing said suction device;
 - a partition separating said collection chamber from said reception chamber and having a partition surface, said partition having an inlet orifice formed therein for channeling an air stream from said collection chamber to said suction device, said inlet orifice of said partition coupling said collection chamber to said suction device in said reception chamber;
 - an air guide funnel having an entry surface forming a part of said partition surface;
 - an intervention guard element connected to the air guide funnel and projecting in a direction toward said collection chamber;
 - a filter bag disposed in said collection space for accumulating the particles.
2. The device according to claim 1, wherein said air guide funnel is provided, with respect to said entry surface, in said partition such that an approximately straight suction air stream is provided from said collection chamber to said suction device in said reception chamber.
3. The device according to claim 1, wherein said entry surface of said air guide funnel is a substantially rectangular entry surface on a same side as said collection chamber.
4. The device according to claim 1, wherein said air guide funnel narrows largely continuously in a direction of said suction device.

5. The device according to claim 1, wherein:
said suction device has a blower with an entry orifice formed therein;
and
said air guide funnel has an exit surface having a substantially
circular configuration and a diameter corresponding substantially to said entry
orifice of said blower of said suction device.

6. The device according to claim 1, wherein said air guide funnel is
integrated as an independent structural part into said partition.

7. The device according to claim 1, wherein said partition and said air
guide funnel form a one-piece jointly produced structural part.

8. (Canceled)

9. The device according to claim 1, wherein said intervention guard
element is a dome-shaped ribbed body having gaps formed therein for a largely
unobstructed routing of the air stream from said collection space through to said
suction device.

10. (Canceled)

11. The device according to claim 1, further comprising at least one filter
element for purifying the air stream from said collection chamber to said suction
device, said filter element is disposed upstream of said entry surface of said air
guide funnel.

12. (Canceled)

13. A vacuum cleaner, comprising:
 - a collection chamber for accumulating particles;
 - a suction device generating an air flow;
 - a reception chamber housing the suction device;
 - a partition separating the collection chamber from the reception chamber and defining an inlet orifice receiving the air flow from the collection chamber;
 - an air guide funnel connected to the partition at the inlet orifice and extending away the collection chamber to an exit orifice, the inlet orifice having a substantially rectangular cross-section and the exit orifice having a substantially circular cross-section; and
 - an intervention guard element connected to the air guide funnel and projecting in a direction toward the collection chamber.
14. The device according to claim 13, wherein the air guide funnel and the partition are constructed together as a single integrally formed structural part.
15. The device according to claim 13, wherein the air guide funnel, the partition, and the intervention guard element are constructed together as a single integrally formed structural part.
16. The device according to claim 13, wherein the intervention guard element is a dome-shaped ribbed body having gaps formed therein for a largely unobstructed routing of the air stream from the collection space through to the suction device.
17. The device according to claim 13, further comprising a filter bag disposed in the collection space for accumulating the particles.

19. A vacuum cleaner, comprising:
- a collection chamber for accumulating particles;
 - a suction device generating an air flow;
 - a reception chamber housing the suction device;
 - a partition separating the collection chamber from the reception chamber and defining an inlet orifice receiving the air flow from the collection chamber;
 - an air guide funnel connected to the partition at the inlet orifice and extending away the collection chamber to an exit orifice, the inlet orifice having a substantially rectangular cross-section and the exit orifice having a substantially circular cross-section;
 - an intervention guard element including a dome-shaped ribbed body connected to the air guide funnel and projecting in a direction toward the collection chamber; and
 - a filter bag disposed in the collection space for accumulating the particles.

20. The device according to claim 19, wherein the air guide funnel and the partition are constructed together as a single integrally formed structural part.

21. The device according to claim 19, wherein the air guide funnel, the partition, and the intervention guard element are constructed together as a single integrally formed structural part.

22. The device according to claim 19, further comprising a filter element covering the inlet orifice and purifying the air flow from the collection chamber to the suction device.

(9) **EVIDENCE APPENDIX**

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In re Dailey and Eilers

Court of Customs and Patent Appeals

Appl. No. 7491

Decided Mar. 24, 1966

United States Patents Quarterly Headnotes

PATENTS

Particular patents-Nursing Container

Dailey and Eilers, Nursing Container, claims 25 to 28 of application refused.

*47 Appeal from Board of Appeals of the Patent Office.

Application for patent of Donald E. Dailey and Anton F. Eilers, Serial No. 814,110, filed May 18, 1959; Patent Office Group 460. From decision rejecting claims 25 to 28, applicants appeal. Affirmed; Smith, Judge, dissenting with opinion.

John Rex Allen (Richard S. Phillips of counsel) both of Chicago, Ill., for appellants.

Clarence W. Moore (J. F. Nakamura of counsel) for Commissioner of Patents.

Before Worley, Chief Judge, and Rich, Martin, Smith, and Almond, Associate Judges.

Worley, Chief Judge.

This appeal is from the decision of the Board of Appeals which affirmed the examiner's rejection of claims 25-28 in appellants' application [FN1] for "Nursing Container."

The invention relates to a disposable nursing container for infants. Appellants state:

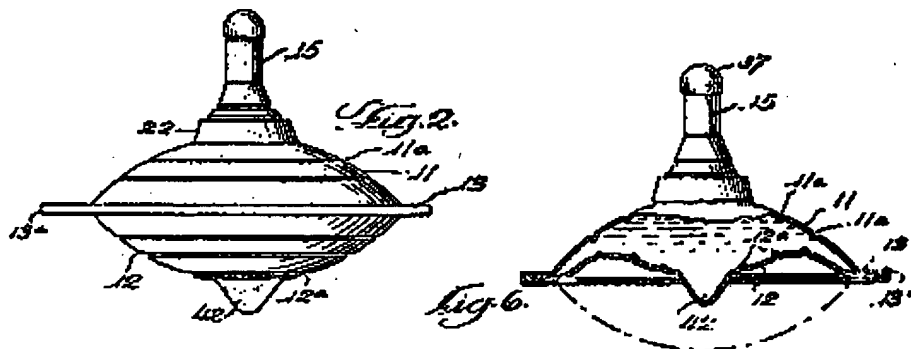
The nursing container with which the invention is concerned is collapsible so that air is not admitted as the contents are drained. Accordingly the likelihood of the infant swallowing air during feeding, believed to be a major cause of colic, is reduced.

A further feature is that the top section of the container has the nipple receiving opening therein and the bottom section is collapsible into the top section. The bottom section is more flexible than the top section to facilitate the collapse thereof.

The particular construction which appellants disclose to achieve those results is illustrated in the following drawings:

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Appellants describe that construction and its use in their specification as follows:

Top and bottom sections 11 and 12 of container 10 are preferably of a thin formed plastic sheet material or the like. By "plastic" any suitable flexible material is intended, including rubber, synthetic plastics and the like. * * * Both sections have a generally spherical configuration and are somewhat less than hemispherical in extent. In the specific container illustrated in the drawings, the two sections are defined by a central angle of the order of 80 degrees. This relationship provides a finished container *48 which has a rounded configuration and is convenient to hold. * * *

At the time of feeding, * * * pressure [is applied] to the wall of the container forcing the nipple out. At the same time, any air left in the container during filling is expelled through the nipple so that the infant swallows no air from the container. * * *

If the infant requires stimulation to cause it to nurse properly, a slight pressure applied to the bottom of the container by the palm of the hand forces some of the formula out through the nipple into the infant's mouth. As the formula is withdrawn from the container the bottom section 12 collapses within the upper section 11 as indicated in Figure 6 forcing formula into the nipple keeping it filled. This collapse starts at the juncture line 13 between the container

sections and progresses inwardly therefrom so that formula is not trapped between collapsed portions of the bottom section wall and the wall of the top section. *It is not necessary for air to enter the container as the formula is withdrawn and the cross cut nipple acts as a check valve allowing only the outward flow of formula and restricting inward flow of air.* Thus the likelihood of the infant swallowing substantial quantities of air during nursing is reduced. As the container and nipple are free of air at all times during feeding, it is not necessary that the container be elevated above the infant, but it may be in any position above or below. * * * [Emphasis supplied]

Claim 25 is illustrative:

25. A disposable, plastic infant nursing container of the character described, comprising: a top section of self-sustaining formed material having a nipple opening therein; a bottom section of self-sustaining, formed flexible plastic material sealed to the first section and collapsible therein, said bottom section being more flexible than the top section and having a shape such that in the collapsed condition is closely mated with the interior of the top section, said bottom section retaining a position in which it is placed, whereby the bottom section readily collapses upon the withdrawal of the container contents, without retarding or aiding the flow of the contents therefrom; and a nipple mounted on

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said top section and communicating with the opening therein, said nipple having a slit therein defining a valved nursing opening, whereby the interior of the container is sealed and during nursing the container contents are withdrawn without admission of air to the container, causing collapse of the bottom container section.

Claim 26 defines the valved nursing opening as a cross-cut valve. Claim 27, while defining no particular nipple opening structure, recites the configuration of the top and bottom sections of the container as that of "a portion of a sphere less than a hemisphere." In claim 28, the central angle of those spherical portions is about 80 degrees.

The references are:

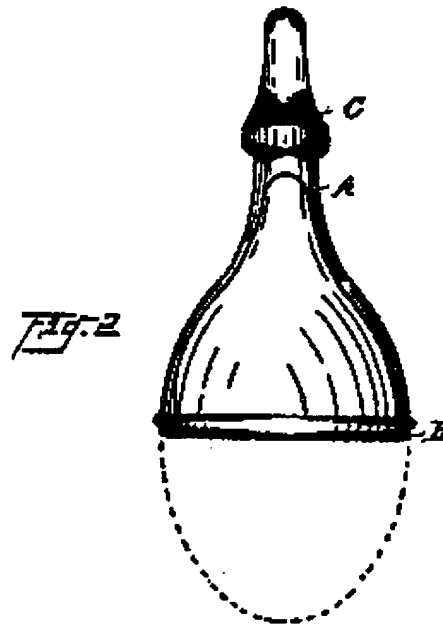
Matzen 554,071 February 4, 1896.

Bardin 2,433,806 December 30, 1947.

Allen 2,446,451 August 3, 1948.

Blanchett 2,989,961 June 27, 1961.

Matzen's nursing bottle is shown in the following drawing:



Matzen's object is:

* * * to provide a bottle in which no air is admitted and in which no vacuum is formed as the milk is withdrawn by the baby, and * * * to provide a bottle from which the milk will flow continuously and evenly, whatever the size of the opening in the nipple.

The patentee describes his construction as consisting

* * * of a nursing-bottle made of two parts, one of which is flexible, *49 the other rigid, and in which the flexible part operates to prevent a vacuum in the bottle as the milk is drawn out by the child and promotes evenness in the flow, * * *.

* * * Fig. 2 is a view of said bottle when the two parts are connected and the bottle has been substantially emptied, the flexible part in this case being drawn into the rigid part.

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While part A is made of a rigid material, part B consists of

* * * flexible material so thin and light that it will readily respond to the suction of the infant through the nipple and surrender itself to such suction with practically no resistance whatever of its own, thus following the withdrawal of the milk and at last losing itself bodily in the upper half, A, and filling the space thereof, as seen in Fig. 2. I believe that a good quality of elastic rubber is the best material from which to make the part B, and now use very thin vulcanized rubber for this purpose. * * *

Matzen describes the use of his container thus:

* * * The nipple is put on and then the collapsible part B is compressed until all of the air is forced out through the hole in the nipple, whereupon the bottle is ready to give to the child. As the baby sucks the milk from the bottle, the collapsible part B is gradually drawn into the part A, thus reducing the capacity of the bottle, and this goes on until the milk is withdrawn and said part B substantially fills the part A, * * *.

Matzen noted several problems with respect to "ordinary" nursing bottles. In the use of the ordinary rigid glass bottle, the nipple construction necessarily must allow air to be admitted into the bottle, or the flow of milk will cease. Thus the infant had to stop sucking frequently in order that air may be admitted. The presence of air in the bottle results in the baby sucking in air with the milk, with colic as a consequence. The nipple opening in the ordinary bottle had to be relatively large; if small, on the order of a pinhole, the rubber surrounding the hole effectively sealed the nipple opening to entry of air and prevented further withdrawal of milk as well. On the other hand Matzen stated:

* * * if the hole in the nipple is so large that it will not close up and exclude the air, it is at the same time so large that the baby gets the milk too fast.

With my bottle the finest pin-hole may be formed in the nipple, and a small but regular and uninterrupted stream will flow through it.

Matzen also noted his bottle

* * * has the exceptional and distinguishing advantage of being ready to yield its contents to the child whatever the position of the bottle may be. Indeed, one position is practically as good as another and the milk comes freely in all positions. * * *

A detailed discussion of Allen appears unnecessary, beyond noting he discloses a similar nursing container having a bottom portion which

* * * automatically collapses and retracts into the rigid neck as the last of the liquid is sucked from the container by an infant using the nursing unit, in this way providing a non-colic nursing unit in view of the fact that no accumulation of air is permitted within the container.

Blanchett discloses a nipple construction for use with ordinary rigid nursing bottles in which the nipple opening may consist of a cross cut, an I cut, a Y cut, a single hole, or multiple holes. Blanchett states:

* * * The various "cuts" are preferable to the holes because they do not leak when the nursing unit is turned upside down. Neither do they become plugged.

The board did not find it necessary to discuss Bardin, nor do we.

The board agreed with the examiner that claims 25-28 were unpatentable over Matzen or Allen in view of Blanchett. It found claims 25 and 26 to distinguish over Matzen only in terms of the type of nipple opening employed, and claims 27 and 28 to distinguish only in reciting a "less than a hemisphere" configuration. In answer to appellants' argument that their particular slit nipple opening provides a self-sealing action to

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prevent continuous flow and loss of formula from the nurser, the board noted that Blanchett fully appreciated the ability of such an opening to prevent leaks. With respect to claims 27 and 28, it further agreed that the configuration of the container is a "mere matter of choice" not significantly novel over Matzen.

Appellants urge that Matzen is devoid of any suggestion of the desirability of combining a collapsible container with a valved nipple which is responsive only to the sucking of the infant, *50 thereby providing intermittent milk flow. Indeed, appellants state that Matzen promotes the idea of a nipple with a pinhole in it as desirable in order to obtain regular and uninterrupted flow of milk from the container. [FN2] It is appellants' position that the prior art recognizes neither the problem nor result desired and cannot be said to suggest a solution to the problem.

Taking appellants' argument at face value, we think one skilled in the art could hardly be unaware, after reading Matzen, that continuous flow or leakage might be an undesirable feature of the Matzen nursing container construction. Blanchett also recognizes the problem of fluid leakage from a hole opening in a nipple when the container is held upside down and, in a matter-of-fact manner, discloses the solution to that problem—the use of a "slit" nipple opening. We think one of ordinary skill in the art would find it obvious to use the slit nipple of Blanchett in the collapsible container of Matzen in order to achieve intermittent flow responsive to sucking.

As noted above, Matzen discloses that the flexible portion of his container is drawn into the rigid top portion, filling the space thereof. Appellants have presented no argument which convinces us that the particular configuration of their container is significant or is anything more than one of numerous configurations a person of ordinary skill in the art would find obvious for the purpose of providing mating surfaces in the collapsed container of Matzen. See *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459.

The decision of the board is *affirmed*.

FN1 Serial No. 814,110, filed May 18, 1959.

FN2 As the Solicitor points out, it is not at all certain that appellants' interpretation of Matzen is consistent with the actual teaching of that reference. While appellants interpret Matzen as disclosing a container which provides a continuous flow of milk at all times, it seems equally likely that Matzen's container, having a nipple with a pinhole, provides a continuous flow only so long as the infant is sucking, which the infant may do without necessity of stopping to allow air into the container.

Smith, Judge, dissenting.

The majority opinion stands without support as to either the facts upon which it predicates the opinion or the law which it applies thereto. Its logic is the fallacious logic which leads to the conclusion that since each of the words in Lincoln's "Gettysburg Address" were individually old and well known at the time he used them, it would have been obvious for anyone of ordinary skill with a dictionary before him, to have written it. It is this logic which supports the conclusion of the majority here from which we may assume that today with "The Gettysburg Address" before him, it would be obvious for any school boy to select the same words and place them in the same order.

The fallacy I find in the majority opinion has its genesis in its simply ignoring those facts of record which do not support its conclusion. Ignoring these facts also requires the majority to ignore the precise wording, of the claims directed thereto. This is understandable for unless the majority opinion is so construed, there is no support for its result.

As a preliminary observation it is to be noted that all the appealed claims are drawn to a *combination* of elements which separately may be old. This, however, does not warrant the majority in treating

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the claims as claims to the *individually old elements*. It is the new *combination* of these elements which is claimed.

It is this *combination* which must be found to be obvious under the conditions of 35 U.S.C. 103 before the majority opinion can be justified.

The initial fallacy requires the majority to ignore the express limitations contained in 35 U.S.C. 103 and to ignore the legislative intent which seems to have been clearly expressed thereby. The section explicitly provides that the determination of obviousness must be made on the basis of (1) considering "the invention as a whole" and (2) determining the issue of obviousness "as of the time the invention was made." The failure of the majority to here apply these portions of section 103 constitutes what I deem to be a grave error of law therein.

A proper reading of the statute shows the care with which section 103 was drawn to provide safeguards against the use of hindsight reconstruction of the art as has happened in this case. A proper respect for these safeguards would have avoided the fallacies which underlie the majority opinion. [FN1]

*51 Turning to the appealed claims let us see what, in fact, they embrace. As will be shown, the appealed claims embrace significant features other than the collapsible wall of the container and the valved uni-directional flow nipple. Yet the majority rests its opinion on these features. No useful purpose will be served in repeating the features of the claims recited in the majority opinion. I fail, however, to find in the majority opinion any comment on the following features specifically set forth in appealed claim 25:

- (1) a "*disposable*, plastic infant nursing container," in which
- (2) the flexible bottom portion is "sealed to the first section" and
- (3) the shape of the flexible bottom section is "such that in the collapsed condition it closely

mates with the interior of the top section" and

(4) the nipple has "a slit therein defining a valved nursing opening, whereby the interior of the container is sealed and during nursing the container contents are withdrawn without admission of air to the container, causing collapse of the bottom container section."

The fact is that the art relied upon by the majority is not concerned with providing a *disposable* container of the type here under consideration and having the claimed features specified in claim 25. While Allen shows a retractable disposable container, its use requires a rigid neck unit which obviously is not intended to be disposed of when the container is thrown away. The Matzen construction clearly is not of the disposable container type. Instead, the construction is such as Matzen states that:

* * * The bead or rib *b* engages in groove *a'* and helps to make the engagement effective, and yet leave the parts free for the nurse to detach and wash and cleanse as they require.

Neither Allen or Matzen "seal" the flexible bottom section to the top section as disclosed by appellants and as claimed in claim 25.

Claim 25 also calls for the collapsed bottom section to be closely mated with the interior of the top section. Allen clearly shows no such concept. In Matzen the flexible bottom portion formed of flexible rubber may be drawn into the rigid top portion as the bottle is emptied, but is it closely mated as required in claim 25? I think not, as the view of Fig. 1 of Matzen clearly shows.

Neither Allen or Matzen shows a nipple of the type required to meet the language of the claim. Appellants explain that the nipple as shown and claimed will provide an intermittent valved flow. [FN2] They state in their specification:

* * * It is not necessary for air to enter the container as the formula is withdrawn and the cross cut nipple acts as a check valve allowing

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only the outward flow of formula and restricting inward flow of air. This the likelihood of the infant swallowing substantial quantities of air during nursing is reduced. * * *

This, it is the outer extremity of appellants' nipple which contains a slit which is normally closed. This slit opens in response to an infant's nursing. Absent a sucking action by the infant the slit remains closed. The decrease in pressure generated by such sucking opens the slit and causes nutrient to flow from the container. During outward flow of the nutrient, the top portion of the container remains rigid. However the bottom portion, being of flexible self-sustaining material, collapses into the top portion as the nutrient flows outward. When the flow stops, the bottom portion sustains its position. With this construction there is no entrapment of air or fluid within the folds of the collapsible container and the flow of nutrient stops when the infant stops sucking on the nipple.

This, however, does not preclude the majority from finding it obvious to use such a nipple. It finds the cross slitted nipple shown in one view of the nipple disclosed in the Blanchett reference. The majority opinion is silent as to how the Blanchett nipple *as disclosed*, when placed on the Allen or Matzen bottles, would let fluid out *without* letting air in. Unless this can be done, the purpose of Allen and Matzen is defeated, for if air enters as the fluid is drawn out, the flexible portions simply cannot be drawn into the rigid top portions as the majority finds Allen and Matzen intended.

If any on portion of the majority opinion can be said to be more unfair to appellants than another, it is the portion dealing with the Blanchett reference. After ignoring Blanchett's entire invention, the majority after viewing appellant's construction selects from the Blanchett construction the following:

Blanchett discloses a nipple construction for use with ordinary rigid nursing bottles in which the nipple *52 opening may consist of a cross cut, an I cut, a Y cut, a single hole, or multiple holes. Blanchett states:

* * * The various "cuts" are preferable to the holes because they do not leak when the nursing unit is turned upside down. Neither do they become plugged.

The use of the cross cut nipple *without* an air vent is first disclosed in this record by appellants. *It is not disclosed in the Blanchett reference.* Instead of a nipple for keeping air out of the bottle, what Blanchett proposes is

* * * an improved nipple as a result of having a *new large capacity air valve which opens when suction is applied to the nipple*, permitting adequate amounts of air to enter the nursing bottle, and which closes effectively when suction is released, preventing the contents of the bottle from leaking out. [Emphasis added].

Blanchett describes the valve operation as follows:

The principle of operation of this valve is as follows: When the infant sucks through the sucking opening 9 the pressure within the bottle is decreased relative to atmospheric pressure. When the pressure difference is great enough to overcome the natural resiliency of the valve, the *aperture 2 opens* as shown in FIGURE 2, *permitting external air to rush through the ends of the tube and through the valve aperture into the bottle*, as shown by the arrows in FIGURES 2 and 7. When the infant stops sucking and the pressure differential lessens, the natural resiliency of the tube snaps the valve aperture shut preventing leakage. The valve in the closed position is illustrated in FIGURES 1 and 6. [Emphasis added.]

Should any question remain as to what the Blanchett air-valve nipple will do, it is answered by Blanchett as follows:

Thus, it will be seen that a more efficient nipple has been provided which contains a new effective air valve. In particular, the advantages and conveniences of this air valve in a baby nipple are mainly:

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(1) The size of the valve aperture allows a larger volume of air to flow into the bottle in proportion to the infant's sucking effort than the old pin holes, vents, ridges and grooves.

(2) The valve has a more positive and effective closing action which prevents leakage.

(3) The valve does not become plugged even by the coarsest formula.

(4) No loosening or adjusting of the retaining screw cap which formerly caused leakage, is necessary.

(5) The valve is easily cleaned with soap and water. A pipe cleaner or small brush may be run through it to satisfy the most meticulous.

(6) The valve does not in any way interfere with sterilization or with transportation of the nursing unit when using the sealing disc.

The fallacy in the majority opinion, as it was in the opinion of the board, lies in ignoring the specific teachings of Blanchett *which require that air be admitted to the container through his special large capacity air valve nipple*. To adapt the Blanchett nipple, *without the changes first suggested by appellants*, to the Matzen or Allen constructions would defeat the entire purpose of the collapsible portion of the Matzen or Allen constructions.

On the present record the first suggestion of the *combination* of the flexible wall construction and the one way nipple was made by appellants.

The majority opinion states:

* * * We think one of ordinary skill in the art would find it obvious to use the slit nipple of Blanchett in the collapsible container of Matzen in order to achieve intermittent flow responsive to sucking.

As above pointed out, "the slit nipple of Blanchett" simply does not exist except in combination with the air valve. Its purpose is to let

air into the bottle. The majority does not explain and I am at a loss to understand how the Matzen container with *the entire Blanchett nipple* on it can collapse or how it can provide a container in which air is excluded during nursing.

Under comparable circumstances, this court in *In re Shaffer*, 43 CCPA 758, 229 F.2d 476, 108 USPQ 326, 329, stated the view that:

* * * a person having the references before him who was not cognizant of appellant's disclosure would not be informed that the problems solved by appellant ever existed. Therefore, can it be said that these references which never recognized appellant's problem would have suggested its solution? We think not, and therefore feel that the references were improperly combined since there is no suggestion in either of the references that they can be combined to produce appellant's result.

Further, I fail to see how the combination *53 created by the majority would provide the result called for in the "whereby" clause of claim 25 which reads as follows:

* * * whereby the interior of the container is sealed and during nursing the container contents are withdrawn without admission of air to the container, causing collapse of the bottom container section.

What has been said above as to claim 25 and the failure of the references to make its distinctive features obvious, applies also to the other appealed claims. Thus claim 26 requires "a cross-cut valve" in the end of the nipple in the novel *combination* claimed in claim 25.

While all of the above features also are inherent in appealed claim 27, this claim further defines the shape of the top portion of the container as follows:

* * * a top section of self-sustaining formed sheet material having a configuration generally that of a portion of sphere less than a hemisphere * * *

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It defines the bottom section as follows:

* * * a bottom section of formed flexible plastic material having a configuration of a portion of a sphere less than a hemisphere and of a size substantially the same as that of the top section * * *

Further limitations as to the shape of the container are found in claim 28 as follows:

* * * wherein said top and bottom sections each are portions of a sphere of equal diameter, the portions being defined by a central angle of the order of 80 degrees and the sections are sealed together along a planar, circumferential area, said sealed area extending outwardly from the container.

These distinctions are ignored by the majority, apparently for the stated reason that:

* * * Appellants have presented no argument which convinces us that the particular configuration of their container is significant or is anything more than one of numerous configurations a person of ordinary skill in the art would find obvious for the purpose of providing mating surfaces in the collapsed container of Matzen. * * *

It is seldom that one finds so clear a case of (1) ignoring an appellant's teachings and (2) of hindsight reconstruction of the art in view of appellants own disclosure. Upon turning to the record, we find the majority's statement to be totally without support. In appellants' specification it is stated that:

* * * Both sections have a generally spherical configuration and are somewhat less than hemispherical in extent. In the specific container illustrated in the drawings, the two sections are defined by a central angle of the order of 80 degrees. *This relationship provides a finished container which has a rounded configuration and is convenient to hold.* * * * [Emphasis added.]

Appellants also disclose that the particular shape of their container is a convenient one for use and go to some lengths in describing how it can be readily held. Thus in their specification it is stated:

* * * In nursing an infant, the container is preferably held as illustrated in Figure 7 with the second finger inserted through opening 38 in a tab 39 extending outwardly from the juncture line 13 of the container sections, and preferably formed as an integral part of the sections. *The peripheral edge 40 of the two container sections is grasped by the thumb and forefinger on one side of tab 39 and by the third and little finger on the other side with the bottom of the container resting against the palm of the hand. This is an extremely stable support for container 10 which may readily be moved to accommodate changes in the position of the infant.* The thin peripheral flange and light weight of the container permit the baby to hold the container and feed itself at an earlier age than with a heavy glass nursing bottle. [Emphasis added.]

Should this not be a sufficient argument in favor of the particular configuration of the container, the specification also states:

* * * The over-all shape of the container conforms generally with the shape of the mother's breast adding further inducement to the baby to nurse.

To the foregoing, I would add the observation that when one starts with the concept of a disposable device, the factor of cost becomes an important consideration. It is a known fact of which the majority should have taken judicial notice that the spherical form provides the most efficient form of container in terms of the amount of surface *54 materials required for a container of a given capacity. Thus, it seems to me that the shape of the container *as claimed* is its own most effective "argument" as to the importance of the claimed shape, for the closer the shape approaches that of a true sphere, the more efficient becomes the use of the surface forming materials and hence the lower

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the material cost of the container. The art of record is devoid of any such concept.

It should be clear from the foregoing that "the invention as a whole," with which we should be here concerned under the mandate of 35 U.S.C. 103, is a unitary whole, in this case a *disposable* infant feeding device which on this record is *unique in concept* and *novel and unobvious in construction*. By the simple expedient of ignoring the phrase in section 103 "at the time the invention was made," it has been possible for the majority to use appellants' own teachings as the basis for its hindsight reconstruction of the art upon which it bases its finding of obviousness.

But is the "invention as a whole" simply the gathering together of individually old elements in the art? The majority obviously thinks it is and appears to be satisfied to predicate its decision on the showing of a prior art bottle having a collapsible wall construction to which it adds an *air vented* nipple construction from another patent. While the majority has been fit to pay lip service to the decision in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 549, it is my opinion that it has ignored the fundamental rationale of the case which, as I view it, would prohibit the type of obviousness rejection which the majority here affirms. That rationale requires us to follow the conditions of section 103 "realistically;" to place the emphasis on "inquiry, not quality;" and to make the "basic factual inquiries" (1) as to the scope and content of the prior art, (2) the differences between the prior art and the *claims* at issue, and (3) the level of ordinary skill in the art.

Such a factual inquiry should start with asking the fundamental question as to "why" appellants sought the claimed construction. As we pursue the answer to this question we begin to see that factually their "invention as a whole" embraces more than the factors considered by the majority. Perhaps we can find the factual answer to this "why" in the frustration of a parent who has walked the floor with a crying infant who, nursed with a Blanchett nipple, has ingested a large quantity of air with its feeding. Perhaps it is to be found in the concern of

harrassed nurses in a maternity ward who face the same problem without the time or patience to walk the floor with each similarly distressed infant. Perhaps it is found in the demands of the modern mother who wants all things, particularly feeding formulas for her baby, nicely prepackaged in a sterile container which is easy to use and inexpensive enough to be thrown away, thus eliminating the troublesome washing and sterilizing of the prior art units to permit their intended reuse.

Wherever we may go to find the answer as to "why" appellants concerned themselves with this problem is of little present moment except to suggest the various factual facets of the preexisting problem which on this record was first solved by the nursing device here claimed.

It is seldom that we find as clear a case of pure hindsight reconstruction of the prior art as is found in the present majority opinion. I do not consider this to be the type of factual "inquiry" stressed by the Supreme Court in the *Deere* case, *supra*. Apparently impressed by the admitted simplicity of the claimed device, the reasoning of the majority, which it seems to me is substituted for a *factual* inquiry, seems to come down to this, "we have seen appellants' device; it is simple; ergo it is obvious." Such reasoning indeed lends support for the callous observation of some years ago which has been attributed to Mr. Causten Browne that "If it [the invention] is so simple that a judge can understand it, then it is not invention." It is here the caution stated in *Allen v. Standard Crankshaft & Hydraulic Co.*, 323 F.2d 29, 139 USPQ 20, 24 (4th Cir. 1963) should be observed:

In approaching the question of obviousness, however, judges should mistrust their subjective notions, if there are objective indicia to guide their judgments. Though the answer after the event may appear simple, the Court should not convert its simplicity into obviousness in the face of hard proof of recognized need for the answer, of long, unsuccessful search for the answer by people of skill in the art, of recognition by the industry that the claimed invention was the answer, and

53 C.C.P.A. 1029, 357 F.2d 669, 149 U.S.P.Q. 47

(Cite as: 149 U.S.P.Q. 47)

of its prompt adoption with attendant commercial success. Even a substantial combination of some of such criteria ought to outweigh a judge's subjective convictions that if one as skilled as he had really looked for the answer, he immediately could have put his finger upon it.

Unfortunately the *simplicity* of the present device has been converted into *55 *obviousness* by the majority. There is indeed no great "mystery" about the present invention which can be secreted in some exotic chemical formula. There is here no great scientific "breakthrough" which can be expressed in the mystique of mathematical symbolism. But are these the requirements to be met before an invention is patentable under 35 U.S.C. 103? I think not. As stated by Judge Learned Hand in *Reiner v. I. Leon Co.*, 285 F.2d 501, 128 USPQ 25, 27 (2d Cir. 1960):

* * * To judge on our own that this or that new assemblage of old factors was, or was not, "obvious" is to substitute our ignorance for the acquaintance with the subject of those who were familiar with it. * * *

Here as in many commercially significant inventions, the simplicity of the device is the very thing which had eluded the art. Here as in *Dewey & Almy Chem. Co. v. Mimex Co.*, 124 F.2d 986, 52 USPQ 138, 143 (2d Cir. 1942):

* * * It would indeed be absurd to rank the invention as a great pioneer such as come only at rare intervals and are the work of genius. * *
* These inventors did not move along a well-marked way; they struck out a new path which led to a goal that men had unsuccessfully tried to reach for many years. To say that for this they needed to look no further afield than the ordinary routineer, one must shut one's eyes to all the significant facts.

The fallacies of the majority here seem to me to be the same as those on which the unaccepted position of the Government was predicated in *United States v. Adams*, 383 U.S. 39, 148 USPQ 479. In concluding that the Adams battery was nonobvious,

the court pointed to the operating characteristics of the Adams battery which it found to be "unexpected and to have far surpassed then-existing wet batteries." The opinion then continues, at USPQ 483-84:

* * * Despite the fact that each of the elements of the Adams battery was well known in the prior art, to combine them together as did Adams required that a person reasonably skilled in the prior art must ignore that (1) batteries which continued to operate on an open circuit and which heated in normal use were not practical; and (2) water-activated batteries were successful only when combined with electrolytes detrimental to the use of magnesium. These long-accepted factors, when taken together, would, we believe, deter any investigation into such a combination as is used by Adams. This is not to say that one who merely finds new uses for old inventions by shutting his eyes to their prior disadvantages thereby discovers a patentable innovation. We do say, however, that known disadvantages in old devices which would naturally discourage the search for new inventions may be taken into account in determining obviousness.

For the foregoing reasons, I would reverse.

FN1 It seems necessary from time to time to comment on the human frailty in judging what was in the light of the fait accompli of the invention. This frailty is so old that a repetition of Milton's comments of some 300 years ago in "Paradise Lost" seems both appropriate and timely here.

"The invention all admired, and each how he

To be the inventor missed; so easy it seemed,

Once found, which yet unfound most would have thought, Impossible!" (Part VI, L. 478-501)

FN2 In Matzen, the nipple opening is open at all times. No intermittent flow concept is suggested.

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END OF DOCUMENT

Westlaw.

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(Cite as: 1996 WL 1796237 (Bd.Pat.App & Interf.))

*1 THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

Board of Patent Appeals and Interferences

Patent and Trademark Office (P.T.O.)

EX PARTE JEFFERY MOORE

Appeal No. 96-2852

Application 08/055,573 [FN1]

NO DATE REFERENCE AVAILABLE FOR THIS DOCUMENT

David E. Bennett

Rhodes, Coats and Bennett

909 Glenwood Avenue

P.O. Box 5

Raleigh, NC 27602

Before CALVERT, STAAB, and McQUADE

Administrative Patent Judges.

McQUADE

Administrative Patent Judge.

ON BRIEF

DECISION ON APPEAL

This appeal is from the final rejection of claims 1 and 2, all of the claims pending in the application.

The invention relates "generally to marking devices used in construction for marking a straight line, and more particularly to a chalk box containing a line covered with powdered chalk" (specification, page 1). Claim 1 is illustrative and reads as follows:

1. A chalk box comprising:

a) a case having a hollow cavity, said case including a generally teardrop-shaped main body section having a longitudinal axis and an arched neck joining the main body [section] [FN2] along its longitudinal axis, wherein the arched neck extends forwardly from said main body section and curves to one side

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thereof;

- b) a line aperture formed at a forward portion of the neck communicating with the interior of the case;
- c) a reel rotatably mounted within main body section of the case; and
- d) a line wound on the reel and extending through the aperture in the case, said line exiting the case at an angle relative to the longitudinal axis of the case.

The references relied upon by the examiner as evidence of obviousness are:

Vernon	660,672	Oct. 30, 1900
Lyle	2,347,273	Apr. 25, 1944
Baumgart	2,673,398	Mar. 30, 1954
Millen	5,042,159	Aug. 27, 1991

The claims on appeal stand rejected under 35 U.S.C. § 103 as follows:

- a) claim 1 as being unpatentable over Millen in view of Vernon and Lyle; and
- b) claim 2 as being unpatentable over Millen in view of Vernon and Lyle, and further in view of Baumgart.

Claim 1 recites a chalk box comprising, inter alia, a case including a generally teardrop-shaped main body section having a longitudinal axis and "an arched neck joining the main body [section] along its longitudinal axis, wherein the arched neck extends forwardly from the main body section and curves to one side thereof." One of the primary arguments advanced in this appeal by the appellant (see pages 4 through 13 in the brief, Paper No. 16) is that Millen, Vernon and Lyle do not disclose and would not have suggested a chalk box having such a neck. In our opinion, this argument is well founded.

Millen discloses

*2 a chalk line retraction device 10 comprised of a hollow casing indicated generally at 12 in which a chalk line aperture 14 is formed. A chalk line winding drum or reel 16 is mounted for rotation within the casing 12. A flexible chalk line 18 has opposite ends 20 and 22. The end 20 is secured to the hub of the drum 16 by frictional engagement in a V-shaped crevice 24 therein, as depicted in FIG. 2. The other end 22 of the chalk line 18 emanates from the casing 12 through the chalk line aperture 14 [[column 3, lines 24 through 33].

Millen's casing 12 can be said to include a main body section (which encloses the drum 16) and a neck (which includes the chalk line aperture 14) extending forwardly from the main body section (see Figures 1 and 3). This neck, however, is not arched and does not curve to one side of the main body section as required by claim 1.

Vernon discloses a chalk line holder having a line opening 12 consisting of a straight tubular structure extending at an angle from the main body section of the holder as shown in Figure 1.

Lyle discloses a measuring tape device having a tape opening defined by an L-shaped extension 7 extending from the main body section of the device.

(Cite as: 1996 WL 1796237 (Bd.Pat.App & Interf.))

In explaining the rejection of claim 1, the examiner states that

Millen discloses substantially similar structure, except for the neck dispensing at an angle. Dispensing at an angle is disclosed by Vernon and Lyle. It would have been obvious to a mechanic with ordinary skill in the art to angle the neck of Millen to dispense at an angle. The motivation is provided by the secondary references. It is noted that no patentable moment is derived from the specified shape of an article in an utility application (In re Dailey et al 149 USPQ 47) [answer, Paper No. 17, page 2].

It is not apparent, however, nor has the examiner explained, how or why Vernon's disclosure of a chalk line holder having a line opening consisting of a straight tubular structure 12 and/or Lyle's disclosure of a measuring tape having a tape opening defined by L-shaped extension 7 would have suggested shaping the neck of Millen's casing so as to meet the above noted limitations in claim 1. The examiner's apparent attempt to overcome these deficiencies in the prior art by citing In re Dailey, 357 F.2d 669, 149 USPQ 47 (CCPA 1966) for the proposition that no patentable moment is derived from the specified shape of an article in an utility application is unsound. In Dailey, the court stated that "[a]ppellants have presented no argument which convinces us that the particular configuration of their container is significant or is anything more than one of numerous configurations a person of ordinary skill in the art would find obvious" (357 F.2d at 672-73, 149 USPQ at 50). In contrast, the appellant's specification (see page 2) establishes that an arched neck as recited in claim 1 makes it easy to hold the chalk line against the surface to be marked without the need to reel out an excess amount of line or to wrap a portion of the line around user's finger, thereby increasing the user's control of the chalk box as compared to the traditional design. Thus, the shape of the neck recited in claim 1 is significant in that it solves a stated problem. Under these circumstances and given the foregoing deficiencies in the examiner's prior art evidence, the shape of the neck recited in claim 1 cannot be baldly dismissed as an obvious matter of design choice. Compare In re Kuhle, 526 F.2d 553, 555, 188 USPQ 7, 9 (CCPA 1975).

*3 In light of the foregoing, we shall not sustain the standing 35 U.S.C. § 103 rejection of claim 1 as being unpatentable over Millen in view of Vernon and Lyle.

Nor shall we sustain the standing 35 U.S.C. § 103 rejection of claim 2, which depends from claim 1, as being unpatentable over Millen in view of Vernon and Lyle, and further in view of Baumgart. In short, Baumgart does not cure the above noted shortcomings of the basic Millen-Vernon-Lyle combination with respect to the subject matter recited in parent claim 1.

The decision of the examiner is reversed.

REVERSED

BOARD OF PATENT APPEALS AND INTERFERENCES

IAN A. CALVERT

Administrative Patent Judge

1996 WL 1796237 (Bd.Pat.App & Interf.)

(Cite as: 1996 WL 1796237 (Bd.Pat.App & Interf.))

LAWRENCE J. STAAB

Administrative Patent Judge

JOHN P. McQUADE

Administrative Patent Judge

FN1. Application for patent filed May 3, 1993.

FN2. The term "the main body" in clause a of claim 1 lacks a proper antecedent basis. It would appear that the word --section-- should be inserted into claim 1 as indicated above to correct this informality.

APPEAL NO. 96-2852 - JUDGE McQUADE

APPLICATION NO. 08/055,573

APJ McQUADE

APJ CALVERT

APJ STAAB

DECISION: REVERSED

Typed By: Jenine Gillis

DRAFT TYPED: 18 Jun 98

FINAL TYPED:

1996 WL 1796237 (Bd.Pat.App & Interf.)

END OF DOCUMENT

(10) **RELATED PROCEEDINGS APPENDIX**

None